

**ABSTRACT****A GATE FOR INFORMATION PROCESSING**

5           A gate for quantum computing is disclosed based on the use of electronic  
excitation to control the interaction between the components of the computer in  
which quantum information is encoded. A means to select which components of the  
computing system are to interact, and hence to enable quantum information to be  
passed systematically around an array of gates constituting a quantum computer is  
10   also disclosed.